

Date: Wednesday, 27/08/2008 3:15:41 PM  
 User: Julie Leacock

## Process Sheet

SPL 11-2

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : STEP WELDMENT  
 Job Number : 41649-2  
 Estimate Number : 12577  
 P.O. Number :  
 This Issue : 27/08/2008 S.O. No. :  
 Prsht Rev : NC  
 First Issue : 27/08/2008 Type : LARGE FAB ASSY  
 Previous Run : 41246  
 Written By :  
 Checked & Approved By : JUL 08.8.26  
 Comment : Est Rev:A New Issue 06-11-09 JLM  
 Est rev B ECN 987 07.10.09 EC verified by: DD  
 Est Rev:C ECN1048 07-12-18 DD verified by: EC  
 Est Rev:D 08-07-28 add chemical conversion coat DD  
 verified by:EC

Part Number : D3562042  
 Drawing Number : D3562 REV E  
 Project Number : N/A  
 Drawing Revision : E  
 Material :  
 Due Date : 08/09/2008 Qty: 2 Um: Each

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 D2622120C Step Extrusion



Comment: Qty.: 1.0000 Each(s)/Unit Total: 4.0000 Each(s)

Qty Part # Description Batch:

1 D2622-120C Extrusion 40937

Check Material for any Dents or Defects

Sad 08/08/27

2.0 LARGE FAB 1 LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Cut D2622 extrusion as per Dwg D3562

2-Deburr and bevel ends for welding

SAD 08/08/27

3.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

SAD 08/08/08

4.0 HAND FINISHING1 HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

W/m 08/08/20





## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: STEP WELDMENT

Job Number: 41649

Part Number: D3562042

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



YL



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

08-08-28

4x

6.0

D3560042

Arm Weldment



Comment: Qty.: 1.0000 Each(s)/Unit Total : 4.0000 Each(s)

ARM WELDMENT

Batch: ~~B 35296~~

B41287(2)

SAD 08-11-24

2x

~~SP 08-11-06~~ 2x

7.0

D3560044

Arm Weldment



Comment: Qty.: 1.0000 Each(s)/Unit Total : 4.0000 Each(s)

ARM WELDMENT

Batch: ~~B 41288~~

B41288

SAD 08-11-24

2x

~~SP 08-11-06~~ (2x)

8.0

MS20600AD4W5

Blind Rivet



Comment: Qty.: 32.0000 Each(s)/Unit Total : 128.0000 Each(s)

Blind Rivet

batch: ~~M108990~~

M108990

SAD 08-11-24

(3)

~~SAD 08-11-06~~ (2x)

9.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

1- Drill Rivet holes as per dwg D3562. Touch up alodine

2- Rivet legs using Magnabond as per dwg D3562.

\*\*\*\*\*Ensure to wipe off any excess magnabond \*\*\*\*\*

A/R Magnabond 6398 Batch: ~~A106695~~

M106695

~~SP 08-11~~

(2x)

SAD 08-11-24

(C)

~~SAD 08-11-06~~

(2x)

10.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 08/12/25 (x2 Rtc)

11.0

D2734

Step End Plate



Comment: Qty.: 2.0000 Each(s)/Unit Total : 8.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 D2734

End Cap

B 39179

SP 08-11-25

(4x)





## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: STEP WELDMENT

Job Number: 41649

Part Number: D3562042

Job Number:



Seq. #:

Machine Or Operation:

Description :

12.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Weld end caps as per Dwg D3562& QSI 004. Inspect for foreign objects as per QSI 024.

A/R Aluminum Rod 41104855

2-Grind end cap welds flush as per Dwg D3562

(Pb) →  
1st  
new proc

(2x)

SP 08.11.25

SAJ 08-11-25

(2x)

13.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

Pd 08-11-25

BE

08-11-25

(2x)

14.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

Soslu27

(Pb) →  
2nd  
new  
proc

15.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

M-1

08/11/27

(2x)

16.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

M109152

M-1 08/11/27

(2x)

17.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Wing Walk as per Dwg D3562 and QSI 005 4.4

Batch: M109219

41

08-11-27

(2x)

18.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

F2

08/11/28

(2)





W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3562-042 PAR #: N/A Fault Category: PROD-LOC. NCR: Yes No DQA: A Date: 08.12.01  
 (D412-630-034) Resolution: RE-work Disposition: RE-work QA: N/C Closed: tg Date: 08/12/02

NCR: <u>41649</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
8/11/25	12.	1 step <del>on the</del> Last Rivet. installed. Only 1 after end caps welded on the stem <del>Broke</del> Broke off about 0.060" shallow.		Drill 3/16" hole to remove rivet. in end cap	SAD	08-11-26		
				check rivet hole (QC) 0.130"	N/A	8/14/25		
		AND the end caps are already welded on. R.E. process.		* Remove all foreign objects.	CPD 08-11-26	8/14/26		8/14/25
				fill hole in end cap per AS7004 A/R M1109213	CPD 08-11-26	8/14/26		
				grind weld flush	CPD 08-11-26	8/14/26		8/14/25
				inspect QC 9	N/A	08/11/26		
				Reinstall rivet MS20600AD4W5 B# <u>M1109213</u>	SAD 08-11-26	8/14/26		

NOTE: Date &amp; initial all entries

NCR Page 1





W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3562-042 PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No See pg. 1 DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR: 41649		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
8/11/26	#14	During inspection it was found that 1 Qty of Rivet was installed incorrectly. The Rivet could be moved after Riveting.	AS/MLZ	Drill out incorrect Rivet	SAD	8/11/26	AS/MLZ	8/11/26
				Qc. measure hole dia. 0.139" - 0.140"	SAD	8/11/26		
		R.C. hole is <del>over</del> over sized to 0.139" - 0.140". in dia. when the rivet was removed. Human Error.	AS/MLZ	Due to hole being oversized Drill out all 15 remaining Rivets and Remove arm. Remove old Magnabond from Both arm and sled	SAD	8/11/26	AS/MLZ	8/11/26
				Fill in hole with weld as per AS7004 A/R # M109213	AS/MLZ	8/11/26		
			AS/MLZ	Remove end cap and grinds weld flush.	SAD	8/11/26	AS/MLZ	8/11/26
				Drill in 0.126" hole. Annodize	SAD	8/11/26		
			AS/MLZ	Re install Magnabond Per Dwg D3562 and Re Rivet 0620600 AD4W5 B# M108990 Qty 16	SAD	8/11/26	AS/MLZ	8/11/26
				Weld Per AS7004 08/11/27 34 B239175 SP and grinds weld flush. A/R 164855	SP	08/11/27		
				inspect Qc 9	n/a	8/11/28	AS/MLZ	8/11/26
				install last Rivet	SAD	08/11/27		

NOTE: Date & initial all entries

\* Page ACN #2 \*

H:\FORMS\Quality Assurance\approved QA\NCRWO RevE

NOTE: Date &amp; initial all entries

\* Page RCL #2 \*





## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: STEP WELDMENT

Job Number: 41649

Part Number: D3562042

Job Number:



Seq. #:

Machine Or Operation:

Description :

19.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1  
Pick Assembly Kit

*Pg 4/28 (2)*

20.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

*08/11/28*

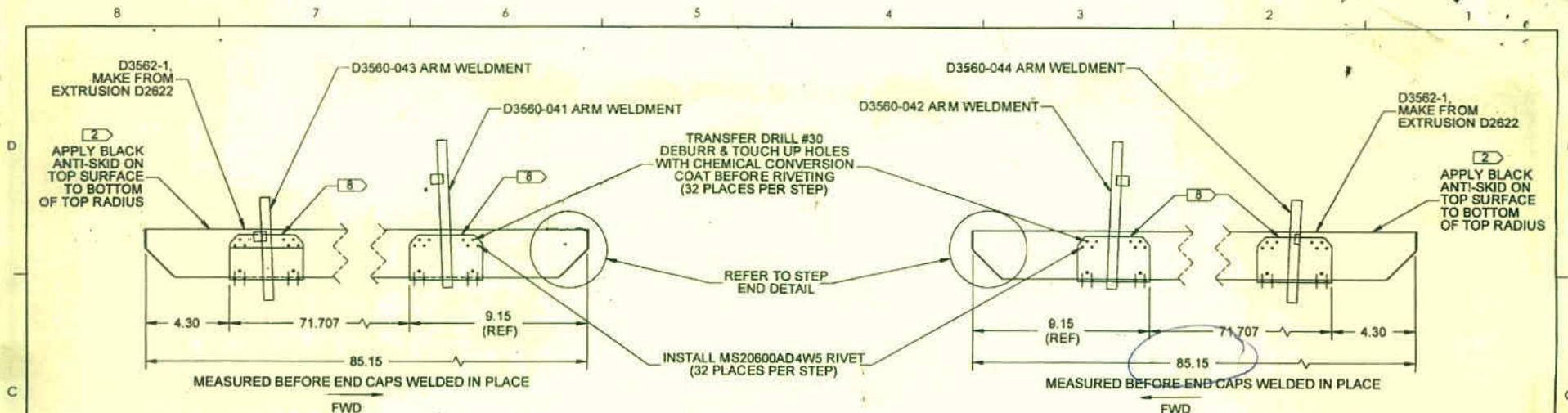
Job Completion



*U 08.11.28*

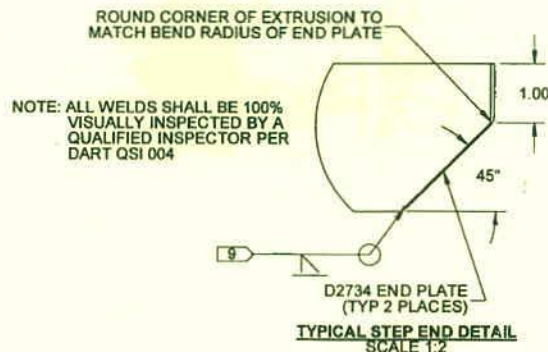






**D3562-041 LH STEP ASSEMBLY**

**D3562-042 RH STEP ASSEMBLY**



**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH:

- i) CHEMICAL CONVERSION COAT STEP EXTRUSION PER DART QSI 005 4.1 BEFORE ASSEMBLY
- ii) POWDER COAT ASSEMBLY GLOSS WHITE (4.3.5.1) OR GREY SANDTEX (4.3.5.6) OR BLACK SANDTEX (4.3.5.7) OR GREEN SANDTEX (4.3.5.8) PER DART QSI 005 4.3

- iii) BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED

- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 8.70 lbs

- 8) INSTALL ARM WELDMENTS WITH A LAYER OF MAGNOBOND 6398 BETWEEN THE ARM WELDMENT AND STEP EXTRUSION. FILL ANY TOOLING HOLES WITH MAGNOBOND 6398. CLEAN OFF EXCESS BEFORE POWDER COATING.
- 9) WELDING: PER DART QSI 004

QTY -041	QTY -042	P/N	DESCRIPTION
X	X	D3562-041	LH STEP ASSEMBLY
		D3562-042	RH STEP ASSEMBLY
1		D3560-041	ARM WELDMENT
	1	D3560-042	ARM WELDMENT
	1	D3560-043	ARM WELDMENT
	1	D3560-044	ARM WELDMENT
32	32	MS20600AD4W5	RIVET
2	2	D2734	END PLATE

E	ADD QTY (2) TO D2734 END PLATE ON D3562-042	PH	08.01.11
D	REMOVE D2806 SPACER NOTE: REDRAWN IN SOLIDWORKS	DC	07.11.16
C	NOW MAGNOBOND, ADD D2806, REMOVE 4 RIVETS	CP	07.06.19
B	ARMS NOW RIVETED TO STEP	CP	07.01.15
A	NEW ISSUE	CP	06.09.26
REV.	DESCRIPTION	BY	DATE
DESIGN	97		
DRAWN	97		
CHECKED	KE		
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	08.01.11		

**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D3562** REV. E  
SHEET 1 OF 1

TITLE **STEP ASSEMBLY** SCALE 1:5

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